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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,438	09/19/2001	Mikio Ihama	0042-0455P-SP	9440
2292	7590	12/30/2003	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			WALKE, AMANDA C	
			ART UNIT	PAPER NUMBER

1752

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,438

Applicant(s)

IHAMA ET AL.

Examiner

Amanda C Walke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6, 7, 9, 13, 15-17, 19, 20, 22, 23, and 25 is/are rejected.
- 7) ☒ Claim(s) 2, 5, 8, 10-12, 14, 18, 18, 21, and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12/14/01, 6) ☐ Other: _____

3/27/03, 7/8/03

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 6, 13, 15-17, 19, 20, 22, 23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Brust et al (6,100,019).

Brust et al disclose a silver halide photographic material comprising high bromide {111} tabular grains having a high chloride epitaxy. The grains are preferably silver iodochlorobromide and contain silver iodide in an amount of less than 10 mole %, and silver chloride in an amount of less than 10 % as well (column 3, line 53 to column 4, line 35). The deposits preferably constitute 0.1 to 25 mol %, most preferably 3-5 mol % of the total silver of the grain. The epitaxial deposits may constitute only 0.1 % of the total silver, thus the chloride may be added in an amount as low as 0.1 mol %. The epitaxial deposits contain at least 90 mol %, AgCl and may contain silver bromide and/ or silver iodide as well (thus any silver bromide or silver iodide would be present in an amount of no greater than 10 mol %). The examples of the reference prepare high bromide grains comprising silver iodochloride epitaxial deposits. Since all of the epitaxies contain at least 90 mol % chloride, 90 % would be the average content (CL). Given that, all of the grains would fall within the CL ranges required by the present claims since no grains may have a AgCl content of less than 90 % (or greater than 100% for that matter), it appears that the AgCl content of the epitaxial protrusions will fall within the scope of the

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claimed CL range. Additionally, given that the amounts of silver iodide in the epitaxies of the examples contain between 0.75 and 1.2 mol% silver iodide, it appears that the grains also fall within the claimed I range. The grains account for at least 90 %, most preferably greater than 97 % of the total grain projected area, have a thickness of less than 0.2 microns, preferably less than 0.07 microns, an ECD of less than 6 microns, and an aspect ratio of at least 5 (column 5, lines 30-57). The grains may be hexagonal (column 7, lines 34-50). The examples demonstrate emulsions wherein 84, 72, and 75 % of the grains having the desired ECD, thus the COV of the grain ECD in the exemplified emulsions meets the instant claim limitations by being less than 30% in each instance (and in one instant less than 20% as required by the instant claim 16). The grains contain high chloride epitaxies in the corners of the grains, thus most preferably 97 % of the total grain population contain epitaxial deposits. The examples prepare grains having 6 epitaxial deposits, one in each corner of the grain, which implies that the grains formed by the examples are hexagonal grains. The exemplified grains also contain one or more dislocation lines at the epitaxial junctions, demonstrating that the grains may have dislocation lines at the apexes of the grains. The material comprising the emulsion is coated on a support (column 10, lines 15-18).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brust et al in view of Antoniadis et al (5,250,403).

Brust et al has been discussed above as teaching grains having an ECD of preferably less than 6, and that lower ECDs result in low levels of granularity.

Antoniades et al disclose a photographic material comprising {111} silver iodobromide hexagonal grains having an average ECD of at least 0.7 microns, preferably 1 to 4 microns, and an average thickness of less than 0.07 microns.

Given that the grains of Antoniadis et al are similar to those of Brust et al and are about the same size, it would have been obvious to one of ordinary skill in the art to prepare the grains of Brust et al choosing to prepare the grains having an ECD of 0.07 microns as taught by Antoniadis et al to lower the granularity of the grains with reasonable expectation of achieving a material having high sensitivity.

Allowable Subject Matter

4. Claims 2, 5, 8, 10-12, 14, 18, 18, 21, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to teach or suggest to one of ordinary skill in the art to prepare grains as described by the instant claim 1 having mesh-like dislocation lines or an edge length of 2 or less.

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Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

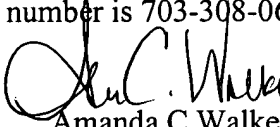
Ihama et al (6,607,874) is cited for its teachings of similar grains, however the reference is unavailable as prior art.

Takada et al (6,225,041), Sugimoto et al (6,432,626), and Kimura et al (5,874,206) are cited for their teachings of similar {111} grains.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C Walke whose telephone number is 571-272-1337. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1321. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Amanda C Walke
Examiner
Art Unit 1752

ACW
December 15, 2003